

AMENDMENTS TO THE CLAIMSListing of claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) An electronic transmission device apparatus, comprising:

a first and a second communication means to be connected to a signal transmission line, wherein said signal transmission line interconnects a transmitting electronic device and a receiving electronic device;

~~an~~ authentication process means for executing ~~an~~ a first authentication process with ~~a first~~ said transmitting electronic device ~~of a signal transmitting side through at least via~~ said first communication means;

a decryption means for decrypting an encrypted signal transmitting by said transmitting electronic device; and

a processing means for executing an operation process with a decrypted signal obtained by decrypting a said encrypted signal at said decryption means, wherein

said authentication process means supplies key information for decrypting said encrypted signal supplied from said ~~first~~ transmitting electronic device based on a result of said first authentication process;

said first communication means supplies said encrypted signal supplied from said ~~first~~ transmitting electronic device connected through said signal transmission line to said

decryption means and said second communication means, and

said second communication means enables ~~a connected second~~
said receiving electronic device ~~of a signal receiving side to~~
~~transmit~~ to receive said encrypted signal and said key
 information and to execute ~~an~~ a second authentication process
 with said ~~second~~ receiving electronic device;

encryption means for re-encrypting said decrypted signal and
for supplying said re-encrypted signal to said second
communication means; and

signal switching means for selecting for output to said
second communication means one of said encrypted signal
transmitted by said transmitting electronic device and said re-
encrypted signal by said encryption means in response to said
second authentication process.

2. (Currently Amended) The electronic transmission device
apparatus according to claim 1, wherein

said authentication process means supplies key information
 for authentication of said ~~second~~ receiving electronic device and
 decryption of said encrypted signal from said ~~first~~ transmitting
 electronic device to said ~~second~~ receiving electronic device
 based on a result of said second authentication process.

3. (Cancelled).

4. (Currently Amended) The electronic transmission device
apparatus according to claim 3 1, wherein

said authentication process means executes ~~an~~ said second authentication process with said ~~second~~ receiving electronic device through said second communication means and supplies to said ~~second~~ receiving electronic device said key information for decrypting said signal selected by said signal ~~selection~~ switching means based on a result of said second authentication process.

5. (Currently Amended) The electronic transmission device apparatus according to claim 4, wherein

a signal selecting operation of said signal ~~selection~~ switching means is executed ~~base~~ based on a selection signal supplied from said ~~first~~ transmitting electronic device through said first communication means.

6. (Currently Amended) The electronic transmission device apparatus according to claim 4, further comprising:

~~an~~ operation input means for conducting ~~an~~ a switching operation of said signal ~~selection~~ switching means.

7. (Currently Amended) A signal transmission method comprising the steps of:

executing ~~an~~ a first authentication process with a ~~first~~ transmitting electronic device ~~of a signal transmission side~~ connected ~~through~~ via a signal transmission line for connecting said ~~first~~ transmitting electronic device and a ~~second~~ receiving electronic device;

executing an operation ~~precessing~~ by process using a decrypted signal obtained by decrypting an encrypted signal supplied from said ~~first~~ transmitting electronic device with key information supplied from said ~~first~~ transmitting electronic device based on a result of said first authentication process;

executing ~~an~~ a second authentication process with said ~~second~~ receiving electronic device ~~for signal reception~~ connected ~~through~~ via said signal transmission line ~~or execution of a relay~~ ~~for such authentication process;~~

~~transmitting said encrypted signal supplied from said first electronic device; and~~

~~transmitting said key information for decrypting said encrypted signal based on the result of said authentication process;~~

re-encrypting said decrypted signal; and

selecting for transmission to said receiving electronic device one of said encrypted signal and said re-encrypted signal in response to said second authentication process.

8-9 (Cancelled).

10. (Currently Amended) The signal transmission method according to claim 8 7, wherein

said ~~selection~~ selecting of either said re-encrypted signal or said encrypted signal supplied from said ~~first~~ transmitting electronic device is executed based on a signal supplied from said ~~first~~ transmitting electronic device.

11. (Currently Amended) The signal transmission method according to claim 8 7, wherein

said ~~selection~~ selecting of either said re-encrypted signal or said encrypted signal supplied from said ~~first~~ transmitting electronic device is executed based on an operation result of an operation input means.

12-17 (Cancelled).